

CLAIMS:

1. A payment parking terminal 28 for managing use of a plurality of parking spaces comprising:

a user interface comprising input and output means for interacting with the payment parking terminal 28;

fee collection means for collecting and associating a payment with one of the parking spaces, the payment associated with one of the parking space being parking-related data;

10 data processing means for processing the parking-related data;

wireless communication means for sending the parking-related data to at least another one of said payment parking terminal 28 and for receiving parking-related data from at least another one of said payment parking terminal 28;

data storing means for storing the parking-related data of said payment parking terminal 28 and the parking-related data of the at least another one of said payment parking terminal 28; and

a clock for keeping time.

20 2. The payment parking terminal 28 according to claim 1, wherein the wireless communication means comprises a radio transmitter and a radio receiver.

3. The payment parking terminal 28 according to claim 2, wherein the wireless communication means further comprises a base station for initiating, managing, terminating and validating radio frequency communications among the radio transmitters and radio receivers of the payment parking terminal 28 and at least another one of the payment parking terminals 28.

30 4. The payment parking terminal 28 according to claim 3, wherein the base station initiates the radio frequency communications with another one of the payment parking terminals 28 via a routing table.

5. The payment parking terminal 28 according to claim 1, wherein the parking-related data stored on the storage means is mirrored onto at least another one of the payment parking terminals 28.

6. The payment parking terminal 28 according to claim 1, wherein the wireless communication means transmits the parking-related data to a portable terminal 28 comprising:

a user interface comprising input and output means for interacting with the portable terminal 28;

10 wireless communication means for requesting and receiving the parking-related data from the payment parking terminal 28;

processing means for processing the parking-related data received from the payment parking terminal 28;

data storing means for storing the parking-related data received from the payment parking terminal 28; and

position determining means for determining a geographical position of said portable terminal 28.

20 7. The payment parking terminal 28 according to claim 6, wherein the wireless communication means of the portable terminal 28 comprises a radio transmitter and a radio receiver for radio frequency communications with the payment parking terminal 28.

8. The payment parking terminal 28 according to claim 6, wherein the portable terminal 28 further comprises direction representing means for representing a graphical display of immediate surroundings via the output means.

30 9. The payment parking terminal 28 according to claim 3, wherein the base station initiates the radio frequency communications directly with another one of the payment parking terminals 28 located within a predetermined communication range.

10. The payment parking terminal 28 according to claim 9, wherein the base station initiates the radio frequency communications indirectly with another one of the payment parking terminals 28 located outside the predetermined communication range via at least another one of the payment parking terminals 28 located within the predetermined communication range.

11. The payment parking terminal 28 according to claim 1, further comprising position determining means for determining a geographical position of the payment parking terminal 28.

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12. The payment parking terminal 28 according to claim 11, wherein the position determining means is GPS based.

13. The payment parking terminal 28 according to claim 1, wherein the clock is GPS based.

14. The payment parking terminal 28 according to claim 1, wherein the output means issues a receipt noting time and a date expiration of authorized parking associated with the payment.

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15. The payment parking terminal 28 according to claim 1, wherein the parking-related data is packet based.

16. The payment parking terminal 28 according to claim 1, wherein the wireless communications means sends the parking-related data to a central management station, the central management station comprising compiling and displaying means for compiling and displaying the parking-related data.

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17. The payment parking terminal 28 according to claim 16, further comprising self-diagnostic means for performing self-diagnostic functions on the payment parking terminal 28 and producing self-diagnostic data, the self-diagnostic data being send to the central management station for analysis.

18. The payment parking terminal 28 according to claim 3, the radio frequency communications are encrypted and decrypted by the processing means for providing security.

19. A wireless point-to-point communication networked metered parking system for managing use of a plurality of parking spaces, the parking system comprising a plurality of payment parking terminals 28 responsible for a plurality of parking spaces, each of the payment parking terminals 28 having:

10 a user interface comprising input and output means for interacting with the payment parking terminal 28;

 fee collection means for collecting and associating a payment with one of the parking spaces, the payment associated with one of the parking space being parking-related data;

 data processing means for processing the parking-related data;

 wireless communication means for sending the parking-related data to at least one of said payment parking terminals 28 and for receiving parking-related data from at least one of said payment parking terminals 28;

20 data storing means for storing the parking-related data of said payment parking terminal 28 and the parking-related data of the at least one of said payment parking terminals 28; and

 a clock for keeping time,

 the payment parking terminals 28 being linked together wirelessly and defining the point-to-point communication network, the parking-related data stored on each of the payment parking terminals 28 being transmitted to, and stored on, at least another one of the payment parking terminals 28 via the point-to-point communication network.

30 20. The parking system according to claim 19, wherein the wireless communication means comprises a radio transmitter and a radio receiver.

21. The parking system according to claim 20, wherein the wireless communication means further comprises a base station for initiating, managing, terminating and validating radio frequency communications among the radio transmitters and radio receivers of the payment parking terminal 28 and at least another one of the payment parking terminals 28.

22. The parking system according to claim 21, wherein the base station initiates the radio frequency communications with another one of the payment parking terminals 28 via a routing table.

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23. The parking system according to claim 19, wherein the wireless communication means transmits the parking-related data to a portable terminal 28 comprising:

a user interface comprising input and output means for interacting with the portable terminal 28;

wireless communication means for requesting and receiving the parking-related data from one of the payment parking terminals 28;

processing means for processing the parking-related data received from one of the payment parking terminals 28;

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data storing means for storing the parking-related data received from the payment parking terminal 28; and

position determining means for determining a geographical position of said portable terminal 28.

24. The parking system according to claim 23, wherein the wireless communication means of the portable terminal 28 comprises a radio transmitter and a radio receiver for radio frequency communications with the payment parking terminal 28.

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25. The parking system according to claim 24, wherein the portable terminal 28 further comprises direction representing means for representing a graphical display of immediate surroundings via the output means.

26. The parking system according to claim 21, wherein the base station initiates the radio frequency communications directly with another one of the payment parking terminals 28 located within a predetermined communication range.

27. The parking system according to claim 26, wherein the base station initiates the radio frequency communications indirectly with another one of the payment parking terminals 28 located outside the predetermined communication range via at least another one of the payment parking terminals 28 located within the predetermined communication range.

28. The parking system according to claim 19, further comprising position determining means for determining a geographical position of the payment parking terminal 28.

29. The parking system according to claim 28, wherein the position determining means is GPS based.

30. The parking system according to claim 19, wherein the clock is GPS based.

31. The parking system according to claim 19, wherein the output means issues a receipt noting time and a date expiration of authorized parking associated with the payment.

32. The parking system according to claim 19, wherein the parking-related data is packet based.

33. The parking system according to claim 19, wherein the wireless communications means sends the parking-related data to a central management station, the central management station comprising compiling and displaying means for compiling and displaying the parking-related data.

34. The parking system according to claim 33, further comprising self-diagnostic means for performing self-diagnostic functions on the payment parking terminal 28 and producing self-diagnostic data, the self-diagnostic data being send to the central management station for analysis.
35. The parking system according to claim 21, the radio frequency communications are encrypted and decrypted by the processing means for providing security.
- 10 36. The parking system according to claim 21, the base stations of the payment parking terminals 28 cooperate together for managing all radio frequency communications on the network.
37. A method for implementing a wireless point-to-point communication networked metered parking system for managing use of a plurality of parking spaces, the method comprising the steps of:
- a. positioning a plurality of payment parking terminal 28 in a vicinity of a plurality of said parking spaces, the payment parking terminal 28 being responsible for a plurality of said parking spaces, each of the payment parking
- 20 terminals 28 comprising:
- a user interface comprising input and output means for interacting with the payment parking terminal 28;
 - fee collection means for collecting and associating a payment with one of the parking spaces, the payment associated with one of the parking space being parking-related data;
 - data processing means for processing the parking- related data;
 - wireless communication means for sending the parking-related data to at least one of said payment parking terminals 28 and for receiving parking-related data from at least one of said payment parking terminals 28;
 - 30 data storing means for storing the parking-related data of said payment parking terminal 28 and the parking-related data of the at least one of said payment parking terminals 28; and

- a clock for keeping time;
- b. configuring a point-to-point communication network by linking wirelessly the payment parking terminals 28 together; and
- c. transmitting the parking-related data stored on each of the payment parking terminals 28 to, and stored on, at least one of the payment parking terminals 28 via the point-to-point communication network.

38. The method according to claim 37, further comprising the step of requesting parking-related data stored on one of the payment parking terminals 28 from a portable terminal 28, the portable terminal 28 comprising:

a user interface comprising input and output means for interacting with the portable terminal 28;

wireless communication means for requesting and receiving the parking-related data from the payment parking terminal 28;

processing means for processing the parking-related data received from the payment parking terminal 28;

data storing means for storing the parking-related data received from the payment parking terminal 28; and

position determining means for determining a geographical position of said portable terminal 28.

39. The method according to claim 37, further comprising the step of issuing a receipt noting time and a date expiration of authorized parking associated with the payment via the output means of the payment parking terminal 28.

40. The method according to claim 37, further comprising the step of transmitting the parking-related data to a central management station, the central management station comprising compiling and displaying means for compiling and displaying the parking-related data.